

The Branchville Correctional Facility Vermiculture Program

The Branchville Correctional Facility (BCF) is located in Perry County on the southern border of Indiana. The facility is located just off of



US 64 on 114 rolling acres in the heart of the Hoosier National Forest. The BCF facility is home to over 900 offenders.

The Indiana Department of Correction made a committed to achieving the state's waste reduction goal of 50% before the year 2001. In 1997 BCF began experimenting with vermicomposting. This process involves developing a worm friendly environment utilized to digest food wastes. This process basically involves housing these worms in rectangular boxes.

The Branchville Correctional Facility's

has developed an innovative system for disposing of their cafeteria wastes.

Worm units at the Branchville site are home to over 500 pounds of red wigglers. Presently BCF maintains 105 boxes which have been constructed by the facility staff.

**Worm box measures
4' x 2' x 1'**



The worms also consume the bedding that is utilized for this program.

The Bedding Recipe for
the BCF Worm Box

- 50 lbs. of shredded, moistened cardboard
- 3 lbs. Of Canadian Peat Moss
- 1 lb. of regular dirt
- 1/2 lb. ground egg shells
- 1/2 lb. coffee grounds



The inmates add bedding and worms into the box. There are 5 pounds of red-worms per box.

The red-worms can tolerate higher temperatures than other worms. The best temperatures are between 50 to 80 °F. The ideal temperature is 70°F.



The eggshells used in the process are thoroughly rinsed to eliminate odors and reduce the chance of salmonella. The shells must be completely dry before crushing.



The vermicomposting process involves special preparation of food scraps from the kitchen.

Food must be sorted and checked to insure that it is “worm friendly”.



Food is washed to eliminate oil, grease, salad dressing, etc.



All food should be thoroughly ground up. The smaller the food particles – the quicker they will be eaten by the worms.



Worm Friendly Foods

- Brussels Sprouts
- Corn
- Cabbage
- Pears
- Apricots
- Peas
- Carrots
- Apples
- Cucumbers
- Asparagus
- Green Beans
- Okra
- Watermelon
- Radishes
- Broccoli
- Wax Beans
- Tomatoes
- Peppers
- Baked or raw potatoes (not greasy)
- Lettuce
- Peaches
- Pineapples
- Cooked onions
- Corn meal
- Oat meal
- Grits
- Creamed wheat
- Coffee grounds

The food is then layered into each box to be consumed by the worms.



Each box receives seven pounds of food per feeding. Each box is fed every six days.



Food is buried ½' to 1" below the top of the bedding. The food is placed in a row that runs the length of the box. A half pound of coffee grounds and egg shells are sprinkled on the top of the bedding.

Beds should be kept moist but not saturated.



One complete cycle for the worms consume both food and bedding takes approximately three months. In 1999 the BCF vermicomposting program consumed 21,000 pounds of cardboard and 48,000 pounds of food waste.



After the feeding cycle, the worms and resulting castings are separated.



The bedding is separated into three piles. Using bright lights the worms are driven to the bottom of the piles.



The worms are then separated from the bedding.



Worm eggs are visible on the fingertip. Worm eggs will hatch in 2-3 weeks and will produce 2 – 20 worms per egg. Worms are mature enough for breeding in 60-90 days.



A months cycle will produce approximately an additional 3 pounds of worms.



Bedding and castings are allowed to air-dry for 24 hours. This allows for easier separation.



Bedding and castings are placed in a harvester for separation.



The final product is a high organic worm castings (manure) for use as a fertilizer. The castings are an excellent organic nutrient for plants, gardens, etc.

1 cubic foot of worm castings compared to the same volume of soils show that castings have:
 5 times the nitrates
 7 times the phosphorous
 3 times the exchangeable magnesium
 11 times the potash
 1.5 times the calcium

For more information, contact:
 Lt. Richard Summers
 Branchville Correctional Facility
 PO Box 500
 Tell City, IN 47586
 812-843-5921
 812-843-4262 (fax)